Amendments to the Claims

Claim 1 **(Currently Amended)** An optical disc ~~including a data area and a time map area,~~ which is readable by a reproducing apparatus that preliminarily reads a table and performs a random access reproduction of a video object by referring to the table, the optical disc including a data area and a time map area,

the data area having recorded therein ~~recording~~ a video object that includes a plurality of data units, each of which contains at least one picture, and

the time map area having recorded therein the ~~recording a~~ table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times, wherein

the table has recorded therein ~~records~~ difference times, each of which corresponds to one of the plurality of reproduction times shown in the table and is a difference between the one of the plurality of reproduction times and a reproduction time of a ~~the~~ first picture of a data unit that includes a picture to be reproduced at the one of the plurality of reproduction times.

Claim 2 **(Currently Amended)** A recording apparatus for recording video data onto an optical disc, the recording apparatus comprising:

an input unit operable to receive input video data to be recorded;

a compressing unit operable to compress the input video data and generate a video object containing a plurality of data units, each of which contains at least one picture;

a writing unit operable to write data onto the optical disc; and

a control unit operable to control the writing unit, wherein

the control unit is operable to

(a) control ~~controls~~ the writing unit ~~unit,~~ to write the video object onto a ~~the~~ data area of the optical disc,

(b) generate ~~generates~~ a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which

the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times,

(c) calculate ~~calculates~~ and store ~~stores~~, into the table, difference times, each of which corresponds to one of the plurality of reproduction times shown in the table and is a difference between the one of the plurality of reproduction times and a reproduction time of a ~~the~~ first picture of a data unit that includes a picture to be reproduced at the one of the plurality of reproduction times, and

(d) control ~~controls~~ the writing unit to write the table into a ~~the~~ time map area of the optical disc.

Claim 3 **(Currently Amended)** A recording method for use in a recording apparatus for recording onto an optical disc a video object containing a plurality of data units, each of which contains at least one picture, the recording method comprising ~~the steps of~~:

writing data onto a data area of the optical disc;

generating a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times; and

writing the table onto a time map area of the optical disc. ~~disc~~ wherein

the generating of the table ~~generating step~~ includes

~~a sub-step of~~ calculating and storing, into the table, difference times, each of which corresponds to one of the plurality of reproduction times shown in the table and is a difference between the one of the plurality of reproduction times and a reproduction time of a ~~the~~ first picture of a data unit that includes a picture to be reproduced at the one of the plurality of reproduction times.

Claim 4 **(Currently Amended)** A reproducing apparatus for reproducing the video object recorded on the optical disc defined in Claim 1, the reproducing apparatus comprising:

a reading unit operable to read data from the optical disc;

a reproducing unit operable to reproduce the video object; and

a control unit operable to control the reading unit and the reproducing unit, wherein

the control unit is operable to

(a) control ~~controls~~ the reading unit to receive an input reproduction start time and read the table,

(b) control ~~controls~~ the reading unit and the reproducing unit to identify a data unit that includes a picture to be reproduced at the input reproduction start time by referring to the read table and start reproducing in accordance with the identified data unit,

(c) identify a ~~identifies the~~ first picture of the identified data unit by referring to a difference time corresponding to the identified data unit, and

(d) control ~~controls~~ the reading unit and the reproducing unit to start the reproducing with the identified first picture.

Claim 5 **(Currently Amended)** A reproduction method for use in a reproducing apparatus including (a) a reading unit operable to read data from the optical disc defined in Claim 1 and (b) a reproducing unit operable to reproduce a video object, the reproduction method comprising ~~the steps of~~:

receiving an input reproduction start time;

controlling the reading unit to read the table;

identifying a data unit that includes a picture to be reproduced at the input reproduction start time by referring to the read table; and

a reading/reproducing operation of ~~step for~~ controlling the reading unit and the reproducing unit to start reproducing in accordance with the identified data unit, wherein

the reading/reproducing operation ~~step~~ includes

~~a sub-step of~~ controlling the reading unit and the reproducing unit to identify a ~~the~~ first picture of the identified data unit by referring to a difference time corresponding to the identified data unit, and start the reproducing with the identified first picture.

Claim 6 **(Currently Amended)** A program recorded on a computer-readable recording medium ~~recording a program~~ for use in a recording apparatus for recording onto an optical disc a video object containing a plurality of data units, each of which contains at least one picture, the program allowing the recording apparatus ~~a computer~~ to execute ~~the steps of~~:

writing the video object onto a data area of the optical disc;

generating a table showing recording addresses of data units, the recording addresses corresponding to a plurality of reproduction times that belong to a period during which the video object is reproduced, each of the data units containing a picture to be reproduced at a corresponding one of the plurality of reproduction times; and

writing the table onto a time map area of the optical disc, wherein

the ~~table~~ generating of the table ~~step~~ includes

~~a sub step of~~ calculating and storing, into the table, difference times, each of which corresponds to one of the plurality of reproduction times shown in the table and is a difference between the one of the plurality of reproduction times and a reproduction time of a ~~the~~ first picture of a data unit that includes a picture to be reproduced at the one of the plurality of reproduction times.

Claim 7 **(Currently Amended)** A program recorded on a computer-readable recording medium ~~recording a program~~ for use in a reproducing apparatus that includes (a) a reading unit operable to read data from the optical disc defined in Claim 1 and (b) a reproducing unit operable to reproduce the video object, the program allowing the reproducing apparatus ~~a computer~~ to execute ~~the steps of~~:

receiving an input reproduction start time;

controlling the reading unit to read the table;

identifying a data unit that includes a picture to be reproduced at the input reproduction start time by referring to the read table; and

a reading/reproducing operation of ~~step for~~ controlling the reading unit and the reproducing unit to start reproducing in accordance with the identified data unit, wherein

the reading/reproducing operation ~~step~~ includes

~~a sub step of~~ controlling the reading unit and the reproducing unit to identify a ~~the~~ first picture of the identified data unit by referring to a difference time corresponding to the identified data unit, and start the reproducing with the identified first picture.